

Protherics PLC Annual Report 2002

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Product Launched	Product Name	Description	Target Segment	Marketing Strategy	Key Features	Competitor Analysis	Market Share (%)	Financial Performance
Q3-2023	Autonomic	Smartwatch for heart rate monitoring.	Healthcare professionals	Partnership with Mayo Clinic	AI-powered heart rate analysis, 24/7 activity tracking.	Mayo Clinic endorsement, FDA clearance.	15%	Revenue: \$10M, Profit: \$2M
Q4-2023	Cerebral Doctor	Neurological diagnostic app.	Neurologists, primary care	Collaboration with Mayo Clinic	AI-powered brain scan interpretation, real-time symptom tracking.	Mayo Clinic endorsement, FDA clearance.	10%	Revenue: \$8M, Profit: \$1.5M
Q1-2024	PainSense	Smartwatch for pain management.	Pain management specialists	Partnership with Mayo Clinic	AI-powered pain assessment, real-time feedback loop.	Mayo Clinic endorsement, FDA clearance.	8%	Revenue: \$5M, Profit: \$1M
PRODUCTS IN CLINICAL TRIALS								
Q2-2024	Hypertension	Smartwatch for blood pressure monitoring.	Cardiologists	Phase II	AI-powered blood pressure analysis, 24/7 monitoring.	Mayo Clinic endorsement, FDA clearance pending.	5%	Revenue: \$3M, Profit: \$0.5M
Q3-2024	PainSense	Smartwatch for chronic pain management.	Pain management specialists	Phase II	AI-powered pain assessment, real-time feedback loop.	Mayo Clinic endorsement, FDA clearance pending.	4%	Revenue: \$2M, Profit: \$0.3M
Q4-2024	NeuroSense	Smartwatch for neurological monitoring.	Neurologists	Phase II	AI-powered brain scan interpretation, real-time symptom tracking.	Mayo Clinic endorsement, FDA clearance pending.	3%	Revenue: \$1.5M, Profit: \$0.2M
PRODUCTS IN RESEARCH								
Q1-2025	AutoSens	Smartwatch for autonomic nervous system monitoring.	Neurologists, primary care	Research	AI-powered autonomic nervous system analysis, 24/7 monitoring.	Mayo Clinic endorsement, FDA clearance pending.	2%	Revenue: \$0.5M, Profit: \$0.1M
Q2-2025	AutoSens	Smartwatch for autonomic nervous system monitoring.	Neurologists, primary care	Research	AI-powered autonomic nervous system analysis, 24/7 monitoring.	Mayo Clinic endorsement, FDA clearance pending.	2%	Revenue: \$0.5M, Profit: \$0.1M
Q3-2025	AutoSens	Smartwatch for autonomic nervous system monitoring.	Neurologists, primary care	Research	AI-powered autonomic nervous system analysis, 24/7 monitoring.	Mayo Clinic endorsement, FDA clearance pending.	2%	Revenue: \$0.5M, Profit: \$0.1M
OTHER PRODUCTS								
Q4-2023	SleepSense	Smartwatch for sleep monitoring.	Primary care, healthcare professionals	Research	AI-powered sleep analysis, 24/7 monitoring.	Mayo Clinic endorsement, FDA clearance pending.	1%	Revenue: \$0.2M, Profit: \$0.05M
Q1-2024	AutoSens	Smartwatch for autonomic nervous system monitoring.	Neurologists, primary care	Research	AI-powered autonomic nervous system analysis, 24/7 monitoring.	Mayo Clinic endorsement, FDA clearance pending.	1%	Revenue: \$0.2M, Profit: \$0.05M
Q2-2024	AutoSens	Smartwatch for autonomic nervous system monitoring.	Neurologists, primary care	Research	AI-powered autonomic nervous system analysis, 24/7 monitoring.	Mayo Clinic endorsement, FDA clearance pending.	1%	Revenue: \$0.2M, Profit: \$0.05M
Q3-2024	AutoSens	Smartwatch for autonomic nervous system monitoring.	Neurologists, primary care	Research	AI-powered autonomic nervous system analysis, 24/7 monitoring.	Mayo Clinic endorsement, FDA clearance pending.	1%	Revenue: \$0.2M, Profit: \$0.05M



Chief executive officer's review

This past year has seen the beginning of a fundamental change in the relationship between the major pharmaceutical companies and their young biotechnology brethren. In recent months 5 of the larger pharmaceutical companies have announced profit warnings, and it is clear that the historic growth rates of 15-20% per annum will no longer be achievable - for many growth may be less than 10% per annum. These lowered growth rates mirror the increasing cost of drug development for big pharma, with lengthening approval times, and fewer new drugs coming to market. In contrast, more and more new drugs are being developed by biotechnology companies, typically at lower cost. On average, it costs only half as much for a biotechnology company to reach an NDA approval as big pharma. Furthermore, more targeted biotechnology-derived treatments are splintering what used to be single blockbuster markets into smaller fractions. Five biotechnology derived drugs have achieved sales exceeding \$1 billion. As biotechnology companies become more commercially focused, most of them will look to market their own products and the number of mid-sized biotechnology companies is likely to grow. As biotechnology-derived products reach the market, there is likely to be a shift in the relative capitalisation of biotech vs pharma. This change is already happening, most notably in the US. Nonetheless, we believe biotechnology remains significantly undervalued compared to the established pharma sector.

Protherics is well placed to take advantage of these changing dynamics. Today, in an environment where the balance sheet takes centre stage, we are fortunate to be able to fund our own early stage clinical development. In the US, we have a team with experience from the hands-on management of 15 trials involving 160 patients at more than 100 trial sites. Between October 2000 and December 2001, only 26 drugs were approved by the FDA. Two of these approvals were achieved by Protherics. With the approval of DigFab™ in the past year, we now have two products marketed in the US. Consequently, we have been able to develop a more commercial perspective. Now, our challenge is to become consistently profitable.

Operations

This past year has seen larger orders for CroFab™ and DigFab™ than we initially projected. We have worked hard to expand our capabilities in Australia and Wales to meet this demand. In Australia, productivity has improved dramatically in the processing of serum, and last year almost 20 tons of serum were produced. In Wales, our batch sizes of CroFab™ have more than doubled, and we have halved the time to completion from 8 to 4 weeks. Further improvements are anticipated in the current year. The appropriate capital expenditure is now being made to increase batch sizes and reduce cost of goods further.



We have revised upwards our
estimate of the market opportunity
for CroFab™ to \$75
million per annum

CroFab™ is a trademark of Protherics Inc.
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Chief executive officer's review (continued)

Careful attention is being paid to risk management, including dual sourcing of venins, geographical separation of sheep flocks, and filling and freeze-drying.

Looking forward 12 to 18 months, we plan to expand CroFab™ production capacity, allowing us to build adequate inventory and meet the demands of a growing and seasonal market.

As our need for clinical trial quantities of vaccines expands, we find it an advantage to be in direct control of our own FDA and MCA approved manufacturing facility. Manufacturing is often a bottleneck for small companies, who find it difficult to locate a supplier of smaller quantities of drugs for clinical trials. This past year we have successfully transferred the manufacture of our angiotensin vaccine from external contractors. This product is now made at our facility in Wales, at a considerable cost saving.

Portfolio Review - Marketed products

CroFab™

CroFab™ has been very well received by physicians who manage snake envenomations. After a full year in the marketplace, it presents a new standard of care, with an excellent safety profile, even in large doses. Physician demand suggests it will continue to be used earlier, more often, and in milder bites than the previous treatment. We have revised upwards our estimation of the potential size of the market opportunity to \$75 million, as CroFab™ use expands into milder pit viper bites, such as those caused by Copperheads. While the majority of rattlesnake bites occur

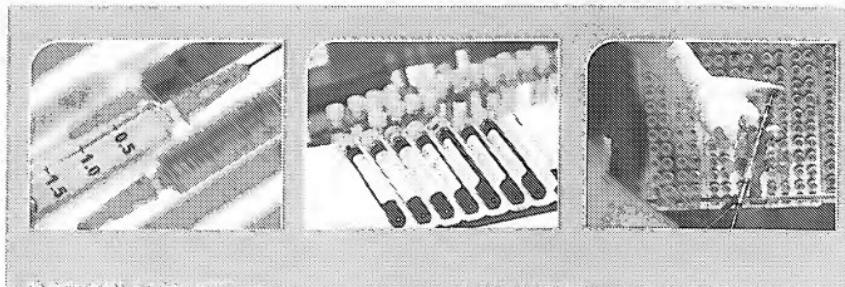
in the Western US, Copperheads are found mostly in the Eastern US. Although seldom fatal, these bites can be serious, with victims often incapacitated for several months. Copperheads account for nearly 40% of pit viper snake bites (including rattlesnakes) in the US. We expect to see a growing number of Copperhead bites treated with CroFab™ as production volumes increase further over the next 12 to 18 months.

DigiFab™

DigiFab™ enters a niche market in the US. With only one other competitor in this \$20 million market, we believe that DigiFab™ will make a significant contribution to our revenues in this next financial year. We hope to extend our marketing capability into Canada, where we will market DigiFab™ ourselves, and we are planning an application to the Canadian regulatory authority this year. Bulk sales to Sri Lanka, where the product is used for the management of Oleander poisoning, should provide further modest revenues.

ViperaTab®

ViperaTab® has had an excellent year, with sales of approximately £350,000 as hospitals have built inventory in what has been a year with an exceptionally large number of bites. Although ViperaTab® will remain a small product, its contribution is significant as margins are good. A very high penetration has been achieved in the Scandinavian market, and future growth is planned by expansion into other European countries.



Digitized by srujanika@gmail.com

The software developed for the management of private school is known as M. Laboratories Inc.'s M. L.

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“*Globalization and Japanese Culture*” was the theme of “Globalization and Japanese Culture,” the international conference held at the University of Tokyo in November 2001. The conference was organized by the Center for East Asian Studies (CEAS) of the Graduate School of Arts and Sciences, the Department of Japanese Language and Literature, the Department of English, and the Department of Germanic Languages and Literatures. The conference was also supported by the Japan Foundation and the Ministry of Education, Science, Sports and Culture. The conference was a success, with over 100 participants from various countries and disciplines. The papers presented at the conference covered a wide range of topics related to globalization and Japanese culture, including the impact of globalization on Japanese literature, film, and media; the role of Japanese culture in global communication; and the challenges and opportunities for Japanese culture in the globalized world.

and addressed those past two years with the FDA. We developed a generic venture strategy, and a dialogue now continues with the agency. Our staff has been working hard to demonstrate our safety, effectiveness, and consistency with the agency. We have been working from a research and development perspective, and we have been able to demonstrate that our product is safe and effective. We have also been working on our business plan, and we have been able to demonstrate that our product is safe and effective. We have also been working on our business plan, and we have been able to demonstrate that our product is safe and effective.

processes. We have had significant experience with large-scale projects, now. We have also been involved in a number of R&D projects. There is a belief that we need to spread our activities outside Europe. We have a limited market here [in the UK], and there are no other countries that have the same kind of market as the UK, and we are not interested. However, with a different balance between the market and the research side, there are changes in the dynamics. In the future, I think it would be good to do more R&D work. There are some very interesting opportunities in Asia, especially in India. In India, there is a very strong interest in R&D, and there is a lot of money available. In India, there is a very strong interest in R&D, and there is a lot of money available. In India, there is a very strong interest in R&D, and there is a lot of money available.

Mathematics Tomorrow is a four-year, three-and-a-half-year, and two-year-with-two-FD6 approach to teaching middle school mathematics. It provides a strong number strand and a variety of other strands, including geometry, measurement, probability, statistics, and algebra. The program emphasizes self-evaluation, enrichment, and challenge. Our staff has developed a wide range of materials and activities to support the needs of all students.

Andrew J. Health

Andrew J. Smith

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the first time in the history of the country, the
Government has been compelled to take such
measures as those which have been adopted
in order to meet the emergency. The
Government has done its best to meet the
situation as it has arisen, and to do what
it could to relieve the distress of the people.
The Government has taken steps to provide
for the relief of the poor and the destitute,
and to assist them in finding employment
wherever possible. The Government has
also taken steps to ensure the safety of
the public, and to prevent any further
losses from occurring. The Government
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A black and white portrait of a middle-aged man with dark hair and glasses, wearing a light-colored shirt. He is smiling slightly and looking towards the camera.

